

Example – CSTE Applied Epidemiology Host Site
Infectious Diseases - Host Site Description
DeKalb County Board of Health

Example – CSTE Applied Epidemiology Host Site

Disclosure: This is an example of a past host site projects proposal and is not intended to be an available host site location. This is posted for example purposes of the projects and activities a host site can propose for the fellow.

Assignment Location: Decatur, US-GA
DeKalb County Board of Health
Office of Epidemiology

Work Environment
Hybrid

Assignment Description

The CSTE AEF fellow will assume the roles and responsibilities of an Epidemiologist 1 within the Office of Epidemiology at DeKalb County Board of Health and will be integrated into the team's workflow. In addition to the fellow's dedicated projects outlined below, anticipated day-to-day activities the fellow will be assigned include:

- Case investigation/management and outbreak investigations for enteric diseases, animal bites/rabies referrals, and syndromic surveillance
- Leading teams to complete tasks related to case investigation and contact tracing for notifiable diseases
- Surveillance system data entry, cleaning, and management
- Data analysis
- Preparing regular epidemiologic reports
- Involvement in Incident Command Structure (ICS) meetings, training and tabletop exercises
- Creating and presenting educational materials/presentations for both internal and external audiences
- Fielding and answering epidemiology-related inquiries from the general public

Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

Statistical and data analysis supports that will be made available to the fellow include R Studio, SAS for Academics, Microsoft Office Suite (including Microsoft Teams for collaboration), and ArcGIS. The fellow will have access to the State Electronic Notifiable Disease Surveillance System (Sendss) and the Georgia Registry of Immunization Transactions and Services (GRITS).

Example – CSTE Applied Epidemiology Host Site
Infectious Diseases - Host Site Description
DeKalb County Board of Health

Projects

Surveillance Activity Title: Syndromic Surveillance in DeKalb County, GA

Surveillance Activity Description:

Syndromic surveillance is an early warning system to detect unusually high levels of illness and determine if public health responses are warranted. The fellow will receive de-identified syndromic surveillance alerts from emergency departments and healthcare facilities via the GA Department of Public Health (DPH). These alerts may pertain to notifiable diseases, clusters of disease (food and non-food related), institutional settings, travel-related illness or other symptom-based notifications. The fellow will communicate with healthcare facilities to gather and analyze appropriate health data. Using these data, the fellow will determine if public health follow up actions are required and discuss/implement these actions with mentors and the rest of the Epidemiology team. In addition, the fellow will develop protocols for the management of clusters/outbreaks detected through syndromic surveillance in collaboration with other DCBOH divisions, including Environmental Health, Emergency Preparedness, and Clinical Services.

Surveillance Activity Objectives:

Objectives:

- To utilize the syndromic surveillance system for early detection in DeKalb County and interpret surveillance data
 - To collect appropriate health data from sources such as case interviews, medical records, laboratory reports and pathology reports
 - To determine public health follow up for notifiable diseases and clusters/outbreaks
 - To collaborate with DPH and other DCBOH divisions on cluster/outbreak management
 - To identify possible areas of improvement for the existing syndromic surveillance system in DeKalb County
- Expected

Deliverables:

- Documentation of follow up for syndromic surveillance alerts within 48 hours (24 hours for priority notifications)
- Protocol for cluster/outbreak response detected through syndromic surveillance in collaboration with the Epidemiology team and other programs and divisions within DCBOH

Surveillance Activity Impact:

Timely follow up with syndromic surveillance alerts will allow for early detection of disease clusters and outbreaks. Protocol development will assist the Office of Epidemiology as a whole to document and streamline existing processes and collaborations with internal and external DCBOH partners.

Surveillance System Evaluation Title: Evaluating Animal Bites Surveillance and Rabies Vaccine Referrals in DeKalb County, GA Surveillance System

Surveillance System Evaluation Description:

Animal bites cases in DeKalb County, GA are reported in the State Electronic Notifiable Disease Surveillance System (Sendss) and require follow up by DeKalb County Animal Enforcement in collaboration with DCBOH Epidemiology and Environmental Health. Due to several factors including the numerous agencies and facilities involved in reporting/collecting information, the lack of public/provider knowledge of reporting requirements, as well as the complexity of follow up, there are limitations to this surveillance system and its associated vaccine referral process. The fellow should perform an evaluation of the existing surveillance system, identify its strengths and limitations, and suggest ways that the system and its processes may be improved.

Example – CSTE Applied Epidemiology Host Site
Infectious Diseases - Host Site Description
DeKalb County Board of Health

Surveillance System Objectives:

Objectives:

- To evaluate the animal bites surveillance system in DeKalb County, GA and understand the limitations of surveillance data
- To interpret surveillance data
- To identify possible areas of improvement for the existing animal bites surveillance system and rabies vaccine referral process in DeKalb County

Expected Deliverables:

- Evaluation report on the animal bites surveillance system and rabies vaccine referral process in DeKalb County, GA

Surveillance System Impact:

By identifying limitations and possible areas of improvement and for the current animal bites surveillance system and vaccine referral process, reporting procedures can be modified to reduce reporting delay and facilitate timely follow up and referrals.

Major Project Title: An Analysis of the Status Neutral Approach to HIV Prevention and Care in DeKalb County, GA

Major Project Description:

HIV testing, treatment, and prevention services are often offered separately, can be challenging to navigate, and further emphasizes a division between people with HIV and people who could benefit from prevention. Stigma is often embedded in the experience of those seeking HIV treatment and prevention services, which may delay or deter people from accessing healthcare services labelled as “HIV” or “STD” clinics. The DCBOH HIV program is transitioning to a status neutral approach towards normalizing HIV treatment and prevention. The approach aims to increase efficiency in linkage to services, as well as advance health equity and reduce disparities by embedding HIV prevention and management into routine care, thereby reducing barriers to accessing and remaining engaged in care. In collaboration with the DCBOH HIV/STD program, the fellow will design an epidemiologic study to assess the impact of the status neutral approach on HIV outcomes in DeKalb County.

Major Project Objectives:

Objectives:

- To develop an understanding of a novel approach to HIV prevention and care and appreciate the diversity of how epidemiology is used in different program areas
- To collaborate with the DCBOH HIV/STD program in identifying relevant metrics and designing an epidemiological study to assess the impact of the status neutral approach on HIV outcomes
- To demonstrate an understanding of study design and the advantages and limitations of different study types
- To understand policies for protection of human subjects in research and the role of an institutional review board (IRB); to write and submit an IRB application
- To assist in the creation of a de-identified database of relevant health data
- To use statistical software to analyze and characterize epidemiologic data
- To interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding

Expected Deliverables:

- Completed IRB application
- Progress reports on data quality and analysis

Example – CSTE Applied Epidemiology Host Site
Infectious Diseases - Host Site Description
DeKalb County Board of Health

- Abstract to be submitted to a national/regional meeting
- Manuscript for publication in a peer-reviewed journal

Major Project Impact:

By analyzing the impact of the status neutral approach to HIV prevention and care, the value of this strategy at the local public health level can be measured and characterized. As the approach has been known to reduce new HIV diagnoses and increase viral suppression rates elsewhere in the US, this assessment will add to the current body of scientific knowledge.

Additional Project #1 Title: Analyzing the Health Impact of Mobile Health Clinics in DeKalb County, GA
Project #1 Type: Major Project

Project #1 Description:

The DeKalb County Board of Health's ten Mobile Health Clinics (MHCs) have been deployed primarily for COVID-19 vaccination. In 2023, the MHCs will be expanding their range of services to offer other vaccinations, including against mpox, as well as other health services like cardiovascular disease/diabetes screening, HIV/STD testing, maternal and child health services, and a mobile farmer's market. This project will assess the effectiveness of MHCs, focusing on vaccination efforts and health screenings undertaken by the DCBOH MHCs. Using the data collected from these efforts, the fellow will assess health outcomes to characterize the impact of MHC events, particularly for populations that have historically had poor access to healthcare. Furthermore, the fellow will use the data to assist in determining where future events should be targeted, thereby addressing health disparities in DeKalb County.

Project #1 Objectives and Expected Deliverables:

Objectives:

- To develop an understanding of the MHC model of local healthcare delivery and appreciate the diversity of how epidemiology is used in different program areas
- To collaborate with the DCBOH Community Health division to design a questionnaire/data collection tool that captures patient feedback regarding the MHCs
- To collaborate with the DCBOH Community Health division to design an epidemiologic study assessing the impact of MHCs
- To understand policies for protection of human subjects in research and the role of an institutional review board (IRB); to write and submit an IRB application
- To assist in the creation of a de-identified database of relevant health data
- To use statistical software to analyze and characterize epidemiologic data
- To interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding

Expected Deliverables:

- Completed IRB application
- Maps and reports of MHC deployment
- Progress reports on data quality and analysis
- Abstract to be submitted to a national/regional meeting
- Manuscript for publication in a peer-reviewed journal

Project #1 Impact:

The MHCs are expected to address systematic barriers to accessing care in DeKalb County's most vulnerable populations, including factors such as lack of resources, poor awareness of available services and lack of transport/time

Example – CSTE Applied Epidemiology Host Site
Infectious Diseases - Host Site Description
DeKalb County Board of Health

to access healthcare. Data analysis conducted by the fellow will not only inform short- and long-term deployment of the MHCs, but will also allow us to acquire more funding for this initiative for further community outreach and expansion.

Please Describe the Fellow’s Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

The CSTE fellow will be included as an integral part of the DCBOH Incident Command System (ICS) structure (10-15% time allocation), which has been mobilized to respond to emergent public health threats, such as mpox. In this role, the fellow will be directly working and communicating with DCBOH Emergency Preparedness, as well as actively participating in outreach and response activities (tabletop exercises, surge capacity, etc.). As with other Epidemiologist 1 level staff, the fellow will be expected to complete FEMA’s Emergency Management Institute training series on ICS structure, National Incident Management System, and National Response Framework). As part of DCBOHs response to outbreaks, the fellow may be called to staff a point of dispensing site for testing/vaccinations or to provide epidemiological assistance at designated events (e.g. mass vaccination events, shelters, etc.). Furthermore, the fellow will undertake data collection or analysis for evaluating emergency preparedness response efforts, which will be presented at after-action reviews and help inform improvements for future responses

Please Describe the Fellow’s Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

The CSTE fellow will be heavily involved in Cluster and Outbreak investigations (25% time allocation). At DCBOH, fellows have previously been very involved and have even led investigations into clusters of COVID-19 and other illnesses reported by facilities, including schools, daycares, long-term care facilities, businesses, or government facilities.

In addition, the fellow will assist in investigating clusters of illness reported through the Georgia Syndromic Surveillance system and follow up with healthcare providers and infection control preventionists regarding clusters of similar illnesses.

The fellow will also be involved in investigating clusters or outbreaks of foodborne illnesses in the community. In collaboration with DCBOH Environmental Health, the fellow will interview cases of enteric illness and ensure that sources of contamination or disease transmission are identified in a timely manner.